

11. Sarah

Program Name: Sarah.java

Input File: sarah.dat

Sarah is making a word scramble game. To scramble the words to be used in her game, Sarah switches a couple of the letters around each of the vowels in the word. An example would be that *computer* is scrambled to be *mocturep*. Sarah has come up with three rules for how the words are to be scrambled. They are:

Working from left to right in each word:

1. If the first letter is a vowel, switch the first and second letter.
2. After the first letter, each time a vowel is encountered, switch the letters that come immediately before and after the vowel.
3. If the last letter is a vowel switch it with the first letter in the word.

Using the word *computer*, the first change follows Rule 2, switching the letters before and after the “o”, resulting in *moctputer*. When the “u” is reached, the “p” and “t” are switched, yielding the new word “*moctuper*”. At the “e”, another switch is made, “*mocpuret*” as the final result.

Sarah is much better at designing games than she is at writing code, so she needs your team's help. Write a program that will take a variety of words and scramble them using Sarah's flipping algorithm.

Input: An unknown number of words each separated by exactly one space with several words on each of several lines. All words will be entirely in lower case letters.

Output: For each word, in the order they are encountered in the file, print the original word followed by exactly one space and then the scrambled word.

Sample input:

```
computer science rocks
texas is the second
largest state in the
united states by both
area and population
```

Sample output:

```
computer mocturep
science eeicnscs
rocks corks
texas xesat
is is
the eht
second cenosd
largest ralsegt
state etats
in in
the eht
united iundet
states staset
by by
both tobh
area aare
and dan
population polutaoipn
```